

## WHAT IS CLAIMED IS:

1           1. An ATM (Asynchronous Transfer Mode) switching system  
2     for connecting a plurality of subscriber's terminal units with  
3     a switching network by the use of an ATM switch operated in ATM,  
4     comprising:  
5           a call history memory for maintaining call histories of  
6     requests for connection from said plurality of subscriber's  
7     terminal units;  
8           a reserved connection memory for writing and reading  
9     reserved connection information; and  
10          a call-signal processing section provided with a first  
11     means for generating a request for connection with respect to  
12     said switching network by the use of said call histories in said  
13     call history memory in the case where no call was issued from  
14     said plurality of subscriber's terminal units during a  
15     predetermined period of time, and storing contents of a response  
16     from said switching network with respect to the request for  
17     connection in said reserved connection memory as updated  
18     reserved connection information, and a second means for using  
19     said updated reserved connection information which has been  
20     stored in said reserved connection memory to control said ATM  
21     switch in the case where there was a call from any of said  
22     subscriber's terminal units after applying said first means and  
23     the request for connection is the same as the reserved connection  
24     information which has been updated and stored in said reserved  
25     connection memory.

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1        2. The ATM switching system as claimed in claim 1, wherein:  
2        said call history memory is provided with a call history  
3        region sectioned into one hour each and having an amount  
4        corresponding to twenty-four hours, and subscriber's terminal  
5        units to each of which any call was issued among said plural  
6        subscriber's terminal units, each of the other end subscriber's  
7        terminal units connected to said switching network, zones, and  
8        traffic types are maintained in each of sections in said call  
9        history region as tables.

1        3. The ATM switching system as claimed in claim 1, wherein:  
2        said call-signal processing section is provided with  
3        a connection table memory for storing switch connection  
4        information given to said ATM switch;  
5        a clock for outputting periodically time signals for  
6        deciding a timing in case of maintaining said call history in  
7        said call history memory; and  
8        a timer for delivering a startup signal inducing to refer  
9        to said call history in said call history memory with respect  
10       to said call-signal processing section in the case where no call  
11       is issued from said plurality of subscriber's terminal units for  
12       a certain period of time.

1        4. The ATM switching system as claimed in claim 3, wherein:  
2        said call-signal processing section refers to said call  
3        history that was stored in said call history memory before a  
4        predetermined period of time from the present time in the case  
5        where said startup signal was received by said call-signal

6 processing section from said timer.

1 5. The ATM switching system as claimed in claim 3, wherein:  
2 said connection table memory makes a set of a VPI (Virtual  
3 Pass Identifier)/VCI (Virtual Channel Identifier) value, which  
4 has not yet been used in a transmission path corresponding to  
5 a request for connection in said call history of said call history  
6 memory, and a VPI/VCI value in a response for connection from  
7 said switching network to store data of the set as said connection  
8 information.

1 6. The ATM switching system as claimed in claim 5, wherein:  
2 said connection table memory stores said respective VPI/VCI  
3 values by means of tables corresponding to said plurality of  
4 subscriber's terminal units and said switching network.